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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/588,022

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Estill Thone Hall Jr

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09/22/2008

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EXAMINER

COLLINS, DARRYL J

ART UNIT

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/588,022	<b>Applicant(s)</b> HALL JR, ESTILL THONE	
	<b>Examiner</b> DARRYL J. COLLINS	<b>Art Unit</b> 2873	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 16 June 2008.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-3, 6-10 and 12-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-3 and 6-8 is/are allowed.
- 6) ☒ Claim(s) 9 and 16 is/are rejected.
- 7) ☒ Claim(s) 10 and 12-15 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 August 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Response to Arguments***

Applicant's arguments filed June 16, 2008 have been fully considered but they are not persuasive. Although the Applicant's Representative has argued that amended claim 9 now incorporates the limitations of dependent claim 11, it should be pointed out that the limitations of intervening claim 10 have not been incorporated into independent claim 9. As originally filed, claim 11 was dependent upon claim 10 wherein claim 10 was subsequently dependent upon claim 9. In the Office Action mailed December 17, 2008, claim 10 -15 were objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including ***all*** *{emphasis added}* of the limitations of the base claim and ***any intervening claims*** *{emphasis added}*.

### ***Claim Rejections - 35 USC § 103***

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 9 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Klemt (U.S. Patent Number 3,005,379).

Although Klemt teaches an optical system comprising a double-gauss architecture (column 1, line 11) having, with respect from the object side to the image side, a lens element (Figure 1, element L1), an acromatic lens element pair (Figure 1, element II), an aperture stop (Figure 1, element D), a second acromatic lens element pair (Figure 1, element III) and a lens

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element (Figure 1, element L7) as claimed in independent claim 9, Klemt fails explicitly to teach a lens family comprising a plurality of lens systems wherein the first and last lens elements are aspheric. Klemt also fails to explicitly teach the use of inexpensive glass materials in the construction of the lens system. However, the use of inexpensive glass materials such as, but not limited to, SF14, SF15, BAK1 or BALF4 2 and the use of aspheric lenses to correct for aberrations, given the Gaussian objective as taught by Klemt, are very well-known in the optical art, such it would have been obvious to one of ordinary skill in the art at the time the invention was made to use of such an objective in a multiple lens system to correct for aberrations using multiple objectives for image projection and to use inexpensive glass materials for cost reduction.

With respect to claim 16, Klemt teaches all of the claimed limitations as outlined above with respect to independent claim 9, and further teaches such a system wherein the system length is less than 1050 millimeters (Table A) as claimed in dependent claim 16.

#### ***Allowable Subject Matter***

Claims 1-3 and 6-8 are allowed.

Claims 10 and 12-15 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: The prior art taken either singularly or in combination fails to anticipate or fairly suggest the limitations of the independent claims, in such a manner that a rejection under 35 U.S.C. §102 or

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§103 would be proper. Although the prior art teaches a lens system having dual Gaussian architecture, the prior art fails to teach such a lens system further comprising one or more lens elements added between the aspheric lens elements at the beginning and end of the lens system as claimed in independent claim 1, a lens system meeting the conditional requirements with respect to the maximum distortion and Modulus Transfer Function as claimed in dependent claims 6 and 10, such a lens system comprising an additional aspheric lens disposed between the first aspheric lens and the first acromatic lens, with respect from the object to the image side, as claimed in dependent claim 13, nor such a lens system comprising an additional acromatic lens pair disposed between the first aspheric lens and the first acromatic lens, with respect from the object to the image side, as claimed in dependent claim 14.

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

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however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DARRYL J. COLLINS whose telephone number is (571)272-2325. The examiner can normally be reached on 6:30 - 5:00 Monday - Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Mack can be reached on 571-272-2333. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Darryl J. Collins/  
Primary Examiner  
Art Unit 2873

15 September 2008